

## **OCEAN EXPLORATION**

### **Silver Spring, Maryland**

#### **Mission**

The OE Program's mission is to search and investigate the oceans for the purpose of discovery and the advancement of knowledge of the ocean's physical, chemical and biological environments, processes, characteristics, and resources. The Program advocates discovery-based science and collaboration between multiple partners and disciplines. Education and outreach are cornerstones of NOAA's OE Program.

Four crucial components comprise the NOAA Ocean Exploration mission:

- Mapping the physical and dynamic aspects of the ocean environment;
- Understanding ocean dynamics at new scales to describe the complex interactions of the living oceans;
- Developing new sensors and systems to advance U.S. leadership in ocean technology, and;
- Reaching out to the public to communicate how and why the secrets of the ocean are vital to the interests of current and future generations.

OE accomplishes these objectives through interdisciplinary expeditions to unknown, or poorly known, regions and through innovative experiments. Peer-reviewed exploration proposals are considered each year, with a funding ratio of approximately 70% of program funds spent externally.

#### **History**

In August 2000, the Secretary of Commerce convened a U.S. panel of leading ocean scientists, explorers, and educators to create a National Strategy for Ocean Exploration. Their report, *Discovering Earth's Final Frontier: A U.S. Strategy for Ocean Exploration*, ([http://oceanpanel.nos.noaa.gov/panelreport/ocean\\_panel\\_report.html](http://oceanpanel.nos.noaa.gov/panelreport/ocean_panel_report.html)) represents the first comprehensive national plan for ocean exploration. In its final recommendations, the panel called for a new Ocean Exploration Program driven by the quest for discovery and the spirit of challenge. The result was the creation of a National Ocean Exploration Program to be lead by the nation's ocean agency, the National Oceanic and Atmospheric Administration (NOAA).

Since it's creation, OE has been considered a multi-line office NOAA Program, with program support coming from various NOAA contributors. This multi-line office ethic has meant better communication of OE requirements and accomplishments across the agency, as well as a better reflection of line office priorities in OE expeditions and projects.

As a principal component of the national strategy contained in the panel's report, NOAA's Office of Ocean Exploration (OE) seeks to bring the best of the nation's scientists to the leading edges of ocean science and technology to (1) discover more about life and processes within the oceans, (2) learn more about maritime cultural resources and heritage, (3) provide a knowledge base that will help enable wise use of the ocean's biological and mineral resources and (4) share new knowledge across a broad, multi-disciplinary user community. Additionally, OE is committed to developing the new tools and techniques for exploration and for sharing discoveries in near-real time ways.

### Financial Profile (Dollars In Thousands)

Fiscal Year	Permanent Funding	Other NOAA	Non-NOAA	Pass Through	TOTAL
FY 2001	4	0	0	0	4
FY 2002	14	0	0	0	14
FY 2003	13.1	0	0	0	13.1

### Personnel Data

FY	FEDERAL EMPLOYEES	JOINT INSTITUTE	Contractors	TOTAL
FY 1999	0	0	0	0
FY 2000	0	0	0	0
FY 2001	5	0	0	5
FY 2002	8	0	1	9
FY 2003	8	0	2	10

FY 2001 was the first year of the Ocean Exploration program, and personnel were provided on loan from other NOAA organizations. Full-time Federal staff were hired and paid by the OE program beginning in FY 2002. In addition to the personnel paid by the program in FY 2003, OE receives free support from NMAO (3 FTE), and part time support from PMEL (0.5 FTE). OE has one contractor that works on Administrative issues, and one that works with NOS on the program web-site.

### OCEAN EXPLORATION PARTNERSHIPS

PARTNERSHIPS	IDENTIFY (and explain)
JOINT INSTITUTES	
PARTNERSHIPS WITH OTHER LABS	PMEL
OTHER OAR PROGRAMS	NURP, Sea Grant
OTHER NOAA RELATIONSHIPS	NMFS (SWFSC, ARSC, NWFSC, SEFSC, PIFSC), NESDIS, NOS (Web team, CSC, NMSP)
OTHER FEDERAL AGENCIES	NASA, NSF, NAVY, USGS, MMS
STATE AGENCIES	South Carolina DNR
LOCAL PARTNERSHIPS	Girl Scouts of America,
UNIVERSITY PARTNERSHIPS	Woods Hole Oceanographic Institution, Harbor Branch Oceanographic Institution, Scripps Institution of Oceanography, University of Washington, University of Rhode Island, Harvard University, University of Miami, University of North Carolina Wilmington, University of Alaska, and others.
INTERNATIONAL	Japan, Russia, China, France

The OE Director reports to three NOAA Line offices and the new AA for PPI, and OE works closely with each Line to determine exploration initiatives that will help them best meet their management needs. In the first year of the program, OE worked extensively with universities, state and local government agencies, non-governmental organizations, contractors and other federal government organizations to maximize return on investment. Over 60 organizations participated in exploration science, and that trend has continued. Approximately 70 percent of OE funds goes outside of NOAA. OE also participates in international efforts, in FY 2003 most notably in deep coral and hydrothermal vent research.

## **OCEAN EXPLORATION Program Accomplishments**

List 3-5 major accomplishments for your laboratory. If accomplishment occurred more than 2 years ago, cite recent progress. Please specify importance of accomplishment, who have been the major users and what has been the benefit to the taxpayer.

1) We increased the body of ocean knowledge which will help resource managers make better decisions on how to manage ocean resources. We did this by mapping over 41,000 square nautical miles (in 2002 and 2003) using high-resolution tools providing new definition of ocean regions and features. These maps differ from nautical charts by characterizing ocean regions and documenting more than just the physical environment. They will enable ocean scientists, policy makers and managers to make informed decisions that will benefit the taxpayer.

2) We discovered new hydrothermal vents, new marine species, and discovered that the known habitat range of others had been extended. Based on past experience, we know that the discovery of new resources may boost the U.S. economy, and new life forms may provide us with new bioproducts with applications in human health, agriculture, and industry. We also discovered several shipwrecks and other possible cultural resources in or adjacent to current National Marine Sanctuaries.

3) We successfully completed several technology demonstrations and designed (working with NESDIS and an Integrated Product team) an OE Data Management System.

4) We developed over 81 lesson plans for grades K-12 to make students aware of ocean science and ocean related issues. All plans are posted for use by educators and students on our website, <http://oceanexplorer.noaa.gov> (Which has received awards from Scientific American magazine, the National Science Teachers Association and others, for being one of the top science web sites in the nation). Benefit to the taxpayer is a better informed public.